

What is claimed:

1. A router with a precedence control function comprises;

means for collecting empty band related information for  
collecting empty band related information related to an empty  
band of each route existing between own router and a  
5 communication IP packet and storing route determining  
information including the collected empty band related  
information, route collecting said empty band related  
information and precedence of said communications IP packet  
in route storing portion, in the event of receiving the  
10 communications IP packet from a terminal directly connected  
to own router and

route specifying portion for finding all of the route  
determining information having precedence equal to said  
communications IP packet and a route matching one of the  
15 route available for said IP packet and selecting a route having  
no overlapping with the route used by other packet with  
precedence higher than said communications IP packet and the  
largest empty band among the found route determining  
information as the route of said communications IP packet, in  
20 the event of receiving the communications IP packet from a  
terminal directly connected to own router.

2. A router with a precedence control function as claimed in  
claim 1, wherein said empty band related information is return  
times of dummy packets.

3. A router with a precedence control function as claimed in claim 1, wherein said means for collecting empty band related information comprises;

a dummy packet generating portion for transmitting a dummy  
5 packet requiring a return dummy packet in which each route  
available for said communications IP packet includes  
originating time, precedence and a route of said  
communications IP packet and the last router includes said  
originating time, precedence and a route, in the event of  
10 receiving a communications IP packet from a terminal directly  
connected to own router,

a return time measuring portion for calculating return time of  
the dummy packet based on the time when said return dummy  
packet is received and originating time in said return dummy  
15 packet, in the event of receiving the return dummy packet and  
storing the route determining information including said  
calculated return time, precedence of said return dummy  
packet and a route of said return dummy packet in said route  
storing portion.

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4. A router with a precedence control function as claimed in claim 3, wherein said dummy packet generating portion has a composition of transmitting dummy packet at each time when a predetermined number of communication IP packet is received  
5 from a terminal directly connected to own router.

5. A machine-readable recording medium for recording a

program for actuating a computer for a router as;

means for collecting empty band related information for  
collecting empty band related information related to an empty  
5 band of each route existing between a computer for own router  
and a communication IP packet and storing route determining  
information including the collected empty band related  
information of each route, route collecting said empty band  
related information and precedence of said communications IP  
10 packet in route storing portion, in the event of receiving the  
communications IP packet from a terminal directly connected  
to the computer for own router and

a route specifying portion for finding all of the route  
determining information having precedence equal to said  
15 communications IP packet and a route matching one of the  
route available for said IP packet and selecting a route having  
no overlapping with the route used by other packet with  
precedence higher than said communications IP packet and the  
largest empty band among the found route determining  
20 information as the route of said communications IP packet, in  
the event of receiving the communications IP packet from a  
terminal directly connected to the computer for own router.